

Ecological and environmental policy of Uzbekistan: threats, problems and solutions

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Abstract. By the 21st century, the problem of environmental protection in the context of globalization, having gone beyond the framework of one country or one region, has an impact on the entire planet. On the path to sustainable development in the world, the United Nations calls on the countries of the world to agree on solving environmental problems and follows the path of uniting their strengths and capabilities for creative work. At the 63rd session of the UN General Assembly, held in 2009, it was especially emphasized that maintaining harmony on planet Earth in order to achieve fair proportionality between the economic, social and environmental demands of the present and future generations is relevant. Socio-political relations for the protection and improvement of the environment are studied in a number of higher educational institutions and research centers around the world. In particular, at the research center and university of Wageningen (Netherlands) (Wageningen Universit and Research), at the University of Bonn in Germany (University of Bonn), at the Center for Environmental History of the University of Elabuga (Russian Federation, Republic of Tatarstan), at Peking University (Chinese People's Republic) scientific research is conducted in the following areas: imbalances between man and nature as a threat to the ecosystem, rational use of natural resources, practical implementation of eco-innovations to achieve sustainable development, improvement of organizational and legal mechanisms for the implementation of public environmental control, features of the development of world environmental historiography.

1 Introduction

In Uzbekistan, during the years of independence, special attention was paid to the issues of protection and rational use of natural resources, ensuring a favorable natural environment for the present and future generations. Existing tasks in this area and large-scale programs aimed at resolving problems of stabilizing the environmental situation in our country require strengthening joint actions of government bodies, public associations, other civil society institutions and citizens.

After gaining independence, the Republic of Uzbekistan inherited a difficult environmental situation due to the emergence of many problems in the field of environmental and natural resource management due to serious structural errors in the agricultural, energy

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and industrial sectors. Pockets of environmental instability were observed in almost all areas. High environmental instability was mainly local in nature. The Republic of Karakalpakstan, Khorezm, Fergana and Navoi regions were presented as the most polluted regions.

Among the environmental problems for the regions of Uzbekistan, the following factors are considered important: air pollution; accumulation of solid, in particular toxic industrial waste; water pollution and fresh water shortages; insufficient supply of clean drinking water to the population; problems of desertification and drying out; salinization and soil erosion; reduction and decrease in biological productivity of complexes of various species; problems of ensuring food security.

If you look at the problems of air pollution in the first years of independence, then in 1992 the number of enterprises polluting the atmospheric air in the republic was 839, in 1993 - 889, most of which were located in the city of Tashkent (155), the rest were in Fergana (105) and Tashkent region (93)[1]. By 2001, this figure increased to 1962, most of which were in the city of Tashkent (351), Fergana (213), Namangan (201) and Kashkadarya (159) regions[2].

And today this problem remains relevant, as it is observed that the level of air pollution by dust in such industrial cities as Andijan, Angren, Bukhara, Navoi, Fergana, Almalyk, Bekabad, Chirchik, Tashkent and Nukus is exceeded by from 2 the average sanitary norm 7 times[3]. In the Namangan region alone, about 70 thousand tons of pollutants are emitted into the atmospheric air per year, and 90% of them (over 63 thousand tons) come from vehicles.

Another problem is the problem of waste; 2 thousand tons accumulate per day in the city of Tashkent, 700 thousand tons per year, and 7-8 million tons of household waste per year throughout the republic. 4-5% of them are recycled. And in large cities of the world this figure is 15-20%[4]. In the Fergana region, an average of 3.5 thousand tons is accumulated per day, 105 thousand tons per month, and 1 million 260 thousand tons of household waste per year[5].

2 Materials and methods

The processes of desertification and drying are the most pressing environmental problem in the country. Due to climate change, this threat is increasing. 80% of the territory of Uzbekistan consists of deserts and steppes, ecological systems that are very sensitive to climate change and anthropogenic factors. Due to the effects of climate change, the amount of precipitation is changing, and the resulting mudslides lead to increased soil erosion.

The Aral disaster increased the continentality of the climate, as a result of which the aridity on summer days increased and, conversely, the frosty days of winter increased. The number of days in the Aral Sea region, where temperatures reached 40 degrees and above, has doubled. If in 1960 the sea level reached 53.52 m[6], then in 1996 this figure was 35.48 m [7]. In the dried part of the sea, the Aralkum desert formed on an area of 5 million hectares. From time to time, strong storms arise here, which lift and carry millions of tons of salt and sand into nearby areas. Salt plumes stretch for 400 km, and the radius of influence of sand and salt storms reaches 300 km. From here, up to 100 million tons of sand rise into the air every year and spread over hundreds of kilometers. Desertification of the Aral Sea region leads to degradation of land resources, a decrease in the quality of natural pastures, and increased soil salinization, which covers more and more territories every year. The environmentally unfavorable situation has had an impact on population migration in the region.

As a result of the initiatives put forward in the speech of the President of the Republic of Uzbekistan Sh. Mirziyoyev at the 72nd session of the UN General Assembly on September 19, 2017[8], on the basis of a multilateral partnership on human security for the Aral Sea

region, the UN Trust Fund was created in November 2018[9]. This created the opportunity to attract donor funds from different countries to implement projects aimed at improving the living conditions of the population living in the territory.

Following the visit of the President of Uzbekistan Sh. Mirziyoyev to the Muynak district of the Republic of Karakalpakstan in November 2018, a State program for 2 years was adopted, within the framework of which it is planned to implement 793 projects worth 1.5 billion US dollars[10].

Our country is considered an agro-industrial state based on irrigated agriculture. Although the area of irrigated land in the country is 4.3 million hectares, it produces 90-95% of agricultural products, i.e. Irrigated lands are of particular importance in meeting the population's demand for food. A threat to the stable use of land in Uzbekistan is the limited land resources and the low quality of its composition. Every year the economic and demographic burden on land increases.

Currently, out of 4.3 million hectares of irrigated land available in the republic, 2.0 million hectares (46.7%) are salinized to varying degrees. In particular, 1 million 324 thousand hectares (30.9%) of land are slightly saline, 570 thousand hectares (13.3%) are moderately saline and 105.5 thousand hectares (2.5%) are highly saline[11].

In the first years of independence, the changes that occurred in economic and environmental relations, the protection of nature and its rational use, the formation of the legal framework necessary for the further development of environmental legislation in a market economy, were reflected in the Constitution of the Republic of Uzbekistan.

During the years of independence, over 40 legal and about 1000 by-laws based on the Constitution of the Republic of Uzbekistan serve to implement such important tasks as environmental protection, rational use of natural resources, and resolution of environmental problems[12]. Among them are the laws "On Nature Protection" (1992), "On Water and Water Use" (1993), "On the Protection of Atmospheric Air" (1996), "On the Protection of Wildlife and Its Rational Use" (1997). g.), "About forest" (1999), "About environmental assessment" (2000), "About underground wealth" (2002), "About waste" (2004), "About environmental control" (2013), "On public control" (2018), as well as the Land Code (1998).

The Law of the Republic of Uzbekistan "On Nature Protection" dated December 9, 1992 determined the role of the Oliy Majlis of the Republic of Uzbekistan in state policy on nature conservation and the settlement of relations[13]. In accordance with the current legislation of the Republic of Uzbekistan, control in the field of ecology, environmental protection, rational use of natural resources and their restoration is carried out by the Cabinet of Ministers of the Republic of Uzbekistan, the State Committee for Ecology and Environmental Protection (GKE), and local authorities[14].

For the purpose of sustainable development of the country, a gradual solution of environmental problems, the "National Action Program for Environmental Protection in the Republic of Uzbekistan for 1999-2005" was developed and implemented[15]. The main attention here was paid to creating a healthy environment for the country's population, rational use of natural resources, preventing water, air and soil pollution, the integrity of nature and other problems. This began to outline the principle of stabilizing and improving the state of the natural environment, reducing the volume of emissions of pollutants into the atmosphere and reducing the incidence of discharge of contaminated wastewater, and increasing the scale of waste recycling[16].

As a continuation of the above program, the "Program of Work on Environmental Protection in the Republic of Uzbekistan for 2008-2012" was implemented, approved by Resolution of the Cabinet of Ministers of the Republic of Uzbekistan No. 212 dated September 19, 2008[17]. 376.14 billion soums, 427.79 million US dollars and 504.4 thousand Euros were spent on the implementation of this Program. In accordance with the program, by converting 145.5 thousand vehicles to gas fuel, the amount of pollutants was reduced by

78.8 thousand tons, over 17.2 billion m³ of associated gases released along with oil were utilized in facilities SJSC "Ozkimyosanoat" nitrogen oxide emissions were reduced by 3.5 million tons, a small hydroelectric power station was built and put into operation on the Gissar reservoir, and the reclamation condition of about 86 thousand hectares of agricultural land was improved[18]. But the measures taken to reduce the level of air pollution in cities such as Almalyk, Nukus, Tashkent, and Chirchik turned out to be not effective enough[19].

“The Action Program for Environmental Protection in the Republic of Uzbekistan for 2013-2017”, adopted on the basis of the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated May 27, 2013, became a historical document that was of great importance in solving environmental problems in our country[20]. In this program, special attention was paid to the issues of protecting the natural environment and nature management, the development of legislation and the regulatory and methodological framework for nature conservation. To implement the activities noted in the program, 89.39 billion soums, 1635.55 US dollars and 57.63 million euros were allocated [21].

3 Results and discussion

As a result of projects implemented in recent years in the regions as part of continuous measures to improve the reclamation condition of irrigated lands, the reclamation condition of over 240 thousand hectares of land has been improved. Based on the Decree of the President of the Republic of Uzbekistan “On measures to further improve the reclamation state of irrigated lands and rational use of water resources for 2013-2017,” the scale of work performed in this area has increased.

During the years of independence, important organizational, socio-economic, and legal measures were developed and implemented in the field of ensuring environmental safety. The measures taken made it possible to reduce the level of air pollution, improve the condition of basic open wastewater, reduce the use of pesticides, improve the structure of crop areas, and involve international organizations in solving national environmental problems[22].

During the years of independence, the Republic of Uzbekistan in the field of environmental protection ratified a number of international conventions and became a member of the relevant protocols for their development. Currently, the Republic of Uzbekistan in the field of environmental protection and use of natural resources is a member of 11 international conventions and 7 multilateral agreements and memorandums. Ensuring the implementation of 6 conventions is entrusted to the GKE, of which 4 conventions relate to the protection of biodiversity, 2 – to the protection of the ozone layer and the implementation of transboundary transit of hazardous waste.

On May 18, 1993, the Republic of Uzbekistan confirmed its right to participate in the Vienna Convention and the Montreal Protocol, thereby undertaking obligations to implement them[23]. To date, the Republic of Uzbekistan has fulfilled 99.9% of its obligations under the Vienna Convention and the Montreal Protocol, and therefore this fact was given special attention by the UN Secretariat for the Protection of the Ozone Layer[24].

In 1993, Uzbekistan joined the United Nations Framework Convention (UNFCCC) on Climate Change. In 1998, it signed the Kyoto Protocol, which was ratified on August 20, 1999[25].

In 1995, Uzbekistan ratified the UN Convention to Combat Desertification. Uzhydromet was elected as the responsible agency for combating desertification. In 1999, a National Action Program was developed in this area[26].

The UN Convention on Biological Diversity is aimed at preserving biodiversity and the areas in which it exists. Based on the “National Strategy and Action Plan for the Conservation of Biological Diversity of the Republic of Uzbekistan”, adopted in 1998, the main attention

in this area was aimed at improving the national legislative framework, as well as expanding the area of natural territories and developing existing ones. By 2000, the area of specially protected areas amounted to 827,919 thousand hectares, of which 133,177 thousand hectares are covered with forest[27]. Currently, protected natural areas cover about 40% of rare plant species and 70% of animal species in our country[28].

The main obligations of Uzbekistan under the Bonn Convention on the Conservation of Migratory Species of Wild Animals consist of ensuring the protection of migratory species of wild animals. In this area, cooperation has been established with the United Nations Environment Program (UNEP), the International Union for Conservation of Nature, the International Wildlife Fund, the World Crane Fund and other international organizations[29].

Based on the Resolution of the Oliy Majlis of the Republic of Uzbekistan dated August 30, 2001, the Republic of Uzbekistan acceded to the Ramsar Convention. According to analyses, today more than 4 million waterfowl fly through the territory of the Republic of Uzbekistan per year and the open water basins of our country are considered a stopping place for more than 100 species of birds during the winter season. There are about 10 water basins on the territory of the Republic of Uzbekistan, which are of vital importance for local waterfowl[30].

Within the framework of the Basel Convention “On the control of transboundary movement of hazardous waste and their disposal”, only during 2017, projects were implemented in the city to organize an integrated system of household waste management and establish state control over waste management in Uzbekistan using credit funds from international financial institutions Samarkand in the amount of 37.1 million euros - by the French Development Agency and in the city of Tashkent in the amount of 92.25 million US dollars by the Asian Development Bank. Agreements were signed for the implementation of projects in the Fergana Valley worth \$300 million through foreign direct investment by the company “ManCapitaS.P.C.” Bahrain, in the Akhangaran and Parkent districts of the Tashkent region in the amount of 50 million dollars by the company “SejinG&E” of South Korea, in the Jizzakh and Syrdarya regions in the amount of 50 million dollars by the consortium “ENELarchitectural” of Austria, Germany and Azerbaijan (investments were attracted into the field for a total of amount about 570 million dollars).

During the years of independence, in order to strengthen bilateral cooperation with foreign countries in the field of environmental protection and rational use of natural resources, a number of bilateral and multilateral agreements were signed.

Uzbekistan is actively participating in the process of regional cooperation in the field of environmental protection in Central Asia. Uzbekistan is the initiator of the creation of the International Fund for Saving the Aral Sea (IFAS) and two commissions - the Interstate Commission for Sustainable Development and the Interstate Coordination Commission for Water Management, aimed at coordinating and solving problems in the use of natural resources, environmental protection and sustainable development management.

Today, relations in the region are developing through bilateral and multilateral agreements in the field of nature conservation. In 2017, the leaders of Central Asian states discussed the tasks of restoring the ecosystem of the Aral Sea basin, improving the socio-economic and environmental situation in the Aral Sea region, rational use of water resources, ensuring the highest level of environmental protection in the region, and also expressed their readiness to further develop cooperation in in this direction. It should be especially emphasized that this activity is carried out jointly with international organizations.

On June 22, 2018, at the plenary meeting of the UN General Assembly, a resolution was adopted on “Strengthening regional and international cooperation to ensure peace, stability and sustainable development in the Central Asian region.” The resolution notes the importance of developing bilateral and regional cooperation in the field of strengthening security, rational and integrated use of water and energy resources in Central Asia, mitigating

the environmental and socio-economic consequences of the drying up of the Aral Sea, creating a modern transport and transit system in the region, deepening ties in the areas education, science, technology, innovation, tourism, culture, art and sports.

4 Conclusion

As a result of the study of socio-political processes on the path to protecting and improving the environment in the Republic of Uzbekistan, the following conclusions were obtained:

1. During the period when Uzbekistan acquired state independence, there was a need to solve environmental problems accumulated during the Soviet period related to the use of land and water resources, reduction of biodiversity, environmental pollution, as well as to eliminate their social consequences. And this led to the fact that in the process of reforms of state and social construction, issues of environmental protection and improvement became topical.
2. From the very first years of independence, a process began to radically reorganize the regulatory framework of legislation in the field of environmental protection, which, from a practical point of view, differed from the previous system. They began to move from the command-administrative method of using nature to economic ones.
3. The country has outlined a number of measures aimed at achieving a guaranteed level of environmental quality, rational use of the environment, and improving management of the use of nature. There has been increased attention to the development of economic sectors, taking into account the priority of the environment. As a result, the state's environmental activity increased in the system of socio-political relations and its environmental policy emerged as a separate political institution.
4. In the 90s of the twentieth century, environmental policy based on the Constitution and other laws of the Republic of Uzbekistan, the National Security Concept of the Republic of Uzbekistan and the experience of leading foreign countries in the legislative sphere, taking into account the obligations of the republic based on the principles of the Declaration on the Environment and Sustainable Development, provisions and contracts of international conventions, was gradually improved.
5. A high degree of environmental instability in the country during the period under study was observed in the Republic of Karakalpakstan, Khorezm, Fergana and Navoi regions. The problems associated with air pollution due to population growth and its needs, expansion of production, accumulation of solid waste, pollution of water resources and lack of fresh water, salinization and soil erosion, decrease in biological productivity of the complex of species diversity, and ensuring food security have not lost their activity.
6. An environmentally oriented approach in the process of implementing socio-economic and political reforms in the country can be observed in the development and implementation of such documents as the "State Program for Nature Conservation and Efficient Use of Natural Resources until 2005", "National Action Plan for Environmental Protection" nature and sustainable development of the Republic of Uzbekistan", "National Action Program on Environmental Health of the Republic of Uzbekistan", "National Strategy and Action Plan for the Conservation of Biological Diversity", "National Action Plan to Combat Desertification and Drought", "National Strategy for Renewable Energy Sources" " They determined the tactical and strategic direction for the implementation of environmental goals and objectives.
7. In the matter of sustainable development of the country, the gradual solution of environmental problems, the "National Action Program for Environmental Protection in the Republic of Uzbekistan for 1999-2005", "Program of Environmental Protection in the Republic of Uzbekistan for 2008-2012", " Action Program for Environmental Protection in the Republic of Uzbekistan for 2013-2017," which were aimed at

improving environmental protection activities, greening economic sectors, and creating a level of environmental safety for the population and the state.

8. Participation of the Republic of Uzbekistan in international programs and projects, accession to conventions in the field of the environment determined the republic's accession to the global process of protecting and improving the state of the environment and sustainable development. As a member of the UN, Uzbekistan has established cooperation with some of its programs and special agencies, including the United Nations Environment Program (UNEP), the United Nations Development Program (UNDP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Industrial Development Organization (UNIDO), the United Nations Economic Commission for Europe (UNECE) and the Economic and Social Commission for Asia and the Pacific (ESCAP).
9. During the years of independence, the country continued to strengthen partnerships between government agencies, non-governmental non-profit organizations and the private sector. Large non-governmental organizations of a republican scale began to actively participate in the implementation of important government programs. In particular, the experience accumulated during ten years of activity of the Ecological Movement of the Republic of Uzbekistan served to move to a new level in the process of protecting and improving the environment, and to increase public activity in them.

Based on the analysis of the study, the following proposals and recommendations were put forward:

1. Today, the main objectives of the legal regulation of environmental relations are the stabilization and radical improvement of the environmental situation through the adaptation of production to environmental requirements. The introduction of resource-saving, low-waste technologies into production is especially important.
2. In order to minimize the consequences of climate change, it is necessary to implement such measures as the production of environmentally friendly technologies and their introduction into agriculture, increasing the efficiency of irrigation systems, combating desertification and drought, soil salinization and land erosion.
3. It is necessary to implement joint programs in the country to further strengthen the social partnership of state and public organizations in the implementation of environmental projects aimed at strengthening among citizens, especially young people, a sense of caring for the environment and natural resources. Through the targeted involvement of environmental public organizations in this process that have real potential in implementing partnerships with government agencies, the public and donors, it is possible to ensure the achievement of innovative approaches to environmental protection issues.

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